Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to Establish Part 27, The Wireless Communications Service	)	GN Docket No. 96-228

To: The Commission

COMMENTS OF THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED IN RESPONSE TO NOTICE OF PROPOSED RULE MAKING

THE AMERICAN RADIO RELAY
LEAGUE, INCORPORATED

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December 4, 1996

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SUMMARY

The American Radio Relay League, Incorporated (the League), the national association of amateur radio operators in the United States, submits its comments in response to the *Notice of Proposed Rule Making* (the "Notice"), FCC 96-441, released November 12, 1996.

The Notice, issued in response to specific Congressional directive, proposes to create a new "Wireless Communications Service" (WCS) in the 2305-2320 and 2345-2360 MHz bands. It also proposes to auction licenses in this new service by means of competitive bidding. The new service would allow operation of any fixed, mobile, radiolocation, or satellite digital audio radio service ("satellite DARS") operation in these bands.

The interest of the Amateur Service in this proceeding is in the continued availability of 2305-2310 MHz on a secondary basis, and in the enhancement of Amateur operation at 2300-2305 MHz, by creation of a primary amateur allocation in that segment.

The amateur allocation at 2 GHz has been steadily, and largely arbitrarily, winnowed down during the past ten years. It is time that the Commission took an affirmative step to protect what remains of the Amateur Service allocation, and the important and varied amateur uses at 2300-2310 MHz, especially those centered at and near 2304 MHz. The Commission must affirm in this proceeding that amateur operation, secondary to the WCS, may continue at 2305-2310 MHz; it must contemporaneously, in this proceeding or in Docket 94-32, elevate the amateur allocation at 2300-2305 MHz to primary status; and it must affirm the long-term stability of that primary allocation at 2300-2305 MHz, so that amateurs may plan for, and make the necessary commitment to, the establishment of stations in that band over the long term.

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To: The Commission

COMMENTS OF THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED
IN RESPONSE TO NOTICE OF PROPOSED RULE MAKING

The American Radio Relay League, Incorporated (the League), the national association of amateur radio operators in the United States, by counsel and pursuant to Section 1.415 of the Commission's Rules (47 C.F.R. §1.415), hereby respectfully submits its comments in response to the *Notice of Proposed Rule Making* (the "Notice"), FCC 96-441, released November 12, 1996. The Notice, issued in response to specific Congressional directive, proposes to create a new "Wireless Communications Service" (WCS) in the 2305-2320 and 2345-2360 MHz bands. It also proposes to auction licenses in this new service by means of competitive bidding. The new service would allow operation of any fixed, mobile, radiolocation, or satellite digital audio radio service ("satellite DARS") operation in these bands. In the interest of the Amateur Service in continued operation at 2305-2310 MHz, and in the enhancement of Amateur operation at 2300-2305 MHz, the League states as follows:

I. Introduction

1. The Notice in this proceeding was issued in response to the passage, on October 4, 1996, of Public Law 104-208, the *Omnibus Consolidated Appropriations Act*, for FY 1997. That legislation, in part, ordered the Commission to reallocate the frequency bands 2305-2320 MHz, and 2345-2360 MHz, to wireless services, and to assign licenses for the use of those frequencies by competitive bidding. The license auctions are to be completed by April 15, 1997. In effect, the Commission was instructed to raise money by auction of licenses on these frequencies, without any Commission decisionmaking relative to the proper service allocation for the band beyond specification of "wireless services". This legislation is, in the League's experience, the first time that Congress has substituted its judgment for the expertise of the Commission with respect to the allocation of specific frequency bands. Congress was apparently focused upon maximizing and expediting the fund-raising potential of the mandated license auctions. It essentially instructed the Commission to create the widest possible eligibility criteria (consistent with international allocations considerations),[1] and swept aside numerous protective provisions of administrative law[2] in order to speed up the process. Finally,

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[1] See, Title III, Section 3001(a)(1).

[2] Not only was the termination date for the auctions specified, but the effective date of the rules was to be the date of publication in the Federal Register, rather than the 30 days called for by the APA [5 U.S.C. §553(d)]; the Regulatory Flexibility Act requirements were waived, as were information collection requirements; and the opportunity for anyone to Petition to Deny licenses to be granted in these bands, provided for pursuant to

Congress completely ignored administrative proceedings of the Commission governing a part of the subject bands. There was ongoing rulemaking in process, implementing the reallocation of spectrum from government to private-sector use pursuant to the 1993 Omnibus Budget Reconciliation Act.[3] The inclusion of the 2305-2310 MHz segment in the Appropriations Act reallocation was, in the view of the League, an ill-advised action, taken in haste, and which stands to impose a distinctly unfair result relative to the Amateur Service.

2. While it is not the Commission's doing that this reallocation was ordered by Congress in the manner that it was, it should be apparent that the needs and interests of the Amateur Service in access to the 2305-2310 MHz segment were essentially ignored in whatever deliberative process Congress may have utilized in its choice of spectrum for reallocation. It remains the Commission's task now to implement the directive of Congress, while at the same time protecting incumbent users in the band. It is a virtual certainty that the utility of the 2300-2305 MHz band to amateurs will be reduced from primary, licensed operation in the proposed new Part 27 WCS. Given this, the Commission has two

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Section 309(d) of the Communications Act of 1934 (47 U.S.C. §309), was effectively eliminated by reduction of the public notice period from 30 to 7 days.

[3] The Omnibus Budget Reconciliation Act of 1993, Pub. L. 103-66, 107 Stat. 312, enacted August 10, 1993, ("OBRA") ordered NTIA to identify at least 200 MHz of spectrum, which was then allocated for use by Federal Government Agencies below 5 GHz, that could be transferred to private sector use. At least 100 MHz of this spectrum had to be below 3 GHz. *See, 47 U.S.C. §923(e)(2)(A) and (B).*

principal obligations in this proceeding. These are: (1) to accommodate continued amateur use of the 2305-2310 MHz band, and (2) to reaccommodate displaced amateur operations in the residual 2300-2305 MHz segment. In considering these two obligations, the Commission should be guided by two specific requirements of Congress: The first, found in the 1993 Omnibus Budget Reconciliation Act [4], is that the private-sector use of spectrum reallocated by the Government (including the 2300-2310 MHz band), should not excessively disrupt ongoing Amateur Service use of the reallocated bands. The second, found in the Omnibus Consolidated Appropriations Act, is that the Commission shall seek to promote the most efficient use of the spectrum in making the bands of frequencies described in the Act available for competitive bidding.[5]

3. The Commission's Notice in this proceeding states that:

> "...the 2300-2310 MHz band is currently allocated to the amateur radio service on a secondary basis. In addition, the 2310-2360 MHz band is permitted to be used by aeronautical telemetry operations on a secondary basis. We do not propose any changes to these allocations at this time. We reiterate, however, that these operations

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[4] In response to OBRA, NTIA identified 235 MHz of spectrum to be reallocated. Among these was the band 2300-2310 MHz. OBRA instructed that, in identifying spectrum for transfer to non-Government use, the Secretary of Commerce must avoid "excessive disruption of existing use of Federal Government frequencies by amateur radio licensees". Furthermore, in identifying spectrum for reallocation and considering the possible non-Government uses of the bands identified, the Secretary of Commerce was to consider "the extent to which, in general, commercial users could share the frequency with amateur radio licensees."

[5] Title III, Section 3001(b)(1).

would be secondary to any WCS use of the 2305-2320 and 2345-2360 MHz bands. We seek comment on this approach."

Notice, at paragraph 8.

The League requests that the Commission, in this proceeding, continue the secondary amateur allocation in the 2305-2310 MHz band, and upgrade the domestic amateur allocation at 2300-2305 MHz from secondary to primary. These actions, taken together, will compensate for the diminution in availability of the 2305-2310 MHz band for amateur operation[6], and at the same time maximize the efficiency in the use of the 2305-2310 MHz segment, since amateurs can continue to make significant use of the band, especially in rural environments where WCS use of the segment might be light.

II. The 2300-2310 MHz Band

4. The Notice in this proceeding adequately sets forth the international and domestic allocation status of the 2300-2310 MHz band. It omits, however, reference to U.S. Footnote 253, which states that *"in the band 2300-2310 MHz, the fixed and mobile services shall not cause harmful interference to the amateur service."* This footnote acknowledges that this segment is a

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[6] The League filed, on November 19, 1996, in the context of ET Docket 94-32, a Petition for Issuance of Further Notice of Proposed Rule Making, proposing the upgrade of the Amateur allocation at 2300-2305 MHz to Primary. This Petition was largely based on the proposed action taken in the instant proceeding. A copy of that petition is attached hereto for reference. It is unnecessary, however, for the Commission to take the requested action in a separate proceeding. The Commission can, in this proceeding, provide the requested relief as part of the Order adopted in this proceeding. Indeed, the Commission should do so, in view of the diminution in utility of the 2305-2310 MHz segment to the Amateur Service which will result from the actions proposed in this proceeding.

residual amateur allocation below 2390 MHz, following the reallocation, in 1984, of the 2310-2390 MHz band for aeronautical flight-test telemetry.[7] Indeed, until 1984, the Amateur Service enjoyed virtually unrestricted access to the entire 2300-2450 MHz band. As to the 2300-2310 MHz segment, which was, until August 10, 1995, shared domestically by amateurs only with Government radiolocation, the Amateur Service was the principal occupant. Since that date, amateurs are the only occupants of the band. While the most significant use of the band is around 2304 MHz for weak-signal experimentation, there are significant, diverse amateur operations throughout the 10 MHz-wide band, including FM simplex and repeater operation, and fixed links.

5. When Congress ordered the Secretary of Commerce to reallocate 200 MHz of spectrum below 5 GHz for private sector use under OBRA, the 2300-2310 MHz band was identified as a candidate band for reallocation. OBRA, however, contained certain guidelines for implementing the reallocation of frequencies. Title VI thereof specifically recognized the potential disruption of amateur occupancy of shared government spectrum that might result from reallocation. The Amateur Service, having enjoyed a cooperative sharing arrangement with Government users in the band, feared the substitution of commercial services for Government users in that and other shared bands, due to significantly greater use density by commercial licensees. This caused Congress to delineate the

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[7] See, the *Second Report and Order*, General Docket 80-739, FCC 83-511, released December 8, 1983; and the *Report and Order*, FCC 84-446, 56 RR 2d 1413 (1984) in Docket 84-186.

criteria for NTIA's selection of frequencies for reallocation pursuant to OBRA. Specifically, 47 U.S.C. §923(c) states that, in identifying frequencies for reallocation, the Secretary of Commerce shall seek to avoid three adverse results: (i) serious degradation of Federal Government services and operations; (ii) excessive costs to the Federal Government and users of Federal Government Services; and (iii) excessive disruption of existing use of Federal government frequencies by amateur radio licensees. At 47 U.S.C. §923(c)(3)(C), the Act specified that the Secretary shall consider, in analyzing the benefits from a particular reallocation, "the extent to which, in general, commercial users could share the frequency with amateur radio licensees..." Finally, as one of the five grounds for substitution or withdrawal of proposed reallocation frequencies, the Act, at 47 U.S.C. §924(b)(2)(E) lists the circumstance in which the reallocation will disrupt the existing use of a Federal government band of frequencies by Amateur Radio licensees. Thus, there were three distinct sections of OBRA which established that the policy of Congress in private sector use of the reallocated bands is to avoid disruption of amateur use thereof. These limitations were in no wise superseded by Public Law 104-208.

6. In the *"Report from the Federal Communications Commission to Ronald H. Brown, Secretary, U.S. Department of Commerce, Regarding the Preliminary Spectrum Reallocation Report"*, FCC 940213, released August 9, 1994 (the FCC Report), the Commission

stated, with respect to both the 2300-2310 MHz and 2390-2400 MHz bands:

> The largest factor affecting use of these bands is their existing availability for use by the Amateur Service [footnote omitted]. Congress specifically sought to avoid disruption of existing use of Federal Government frequencies by amateur radio licensees [footnote omitted]. We agree with commenters that there is a substantial likelihood that reallocation of the 2300-2310 and 2390-2400 MHz bands to commercial or local government use could cause serious disruption to Amateur service use of these bands.
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> (FCC Report, at 17).

In view of this, the Commission, in the *First Report and Order and Second Notice of Proposed Rule Making* in ET Docket 94-32, 10 FCC Rcd. 4769, 4780, n.52 (1995), stated that it intended to "carefully consider the benefits of continued Amateur service access to 2300-2310 MHz in future decisions." This "careful consideration" that the Commission promised concerning amateur use of the 2300-2310 MHz band, however, has been reduced to a consideration of what continued amateur operation might be accommodated at 2305-2310 MHz after commercial reallocation of that segment, which Congress has now dictated shall occur. Both NTIA, in its *Spectrum Reallocation Final Report*[8], which made available for private sector reallocation the 2300-2310 MHz band, and the Commission, in its *Plan for Reallocated Spectrum*, FCC 96-125, released March 22, 1996, indicated significant doubt that commercial services could successfully share with certain amateur uses at 2300-2310 MHz. The

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[8] See, the U.S. Department of Commerce, NTIA Special Publication 95-32, February, 1995 (referenced herein as the "Final Report"), at Appendix B.

Appendix B of the NTIA Final Report includes a basic analysis of amateur operation and the potential for non-government services to share with amateurs. The Commission's *Plan for Reallocated Spectrum* draws from that NTIA Final Report:

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> Potential uses of this band were discussed in our recent proceeding to allocate spectrum transferred from Federal Government use, ET Docket No. 94-32, although action regarding this band was deferred (citation omitted). Comments filed in that proceeding describe current amateur service use of 2300-2310 MHz. The American Radio Relay League, as well as other commenters, report that this band is used for weak signal operation centered on or near 2304.1 MHz. Weak signal operations require the use of highly sensitive receivers and high powered transmitters. A channelling plan submitted by the Southern California Repeater and Remote Base Association shows weak signal operations from 2303.75-2304.75, with the remainder of the 2300-2310 MHz band being paired with the 2390-2400 MHz band for fixed microwave operations. As discussed in the background section of this plan, the Commission, in Docket 94-32, made primary the allocation for the amateur service at 2390-2400 MHz.
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> *****
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> Sharing between Federal Government users and the amateur service has been successful largely because Federal operations are generally located outside of highly populated areas. (citation omitted). It is very unlikely that the Amateur Service will enjoy an analogous situation with a commercial or other private sector service. If commercial services are to share with the weak signal operations located at 2303.75-2304.75 MHz, they must be able to withstand potential interference from the high-powered transmitters used for those operations, but not create interference to the sensitive receivers used. This is something of a contradiction that tends to point to relatively low powered devices that operate over short distances, such as devices authorized under Part 15 of the Commission's Rules, or to operations with a lower density of use that may be located in relatively remote areas. Similar operations should also be compatible with amateur service fixed operations, as would commercial fixed operations that can be coordinated with amateur systems.
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> *Plan for Reallocated Spectrum, at 26.*

7. The Notice proposal would exempt from commercial reallocation the portion of the 2300-2310 MHz band most heavily used by radio amateurs. The allocation of the 2305-2310 MHz segment, however, to generalized fixed, mobile, and non-government radiolocation uses makes secondary amateur operation in that band distinctly problematic. As a practical matter, it would tend to relegate amateur operation to non-metropolitan areas, away from customers of mobile service providers. While the Amateur Service could continue to make significant use of the 2305-2310 MHz band in certain areas, the band will be far less useful to amateurs than it is now, and it would tend to concentrate amateur fixed and mobile FM simplex, repeater, and control link operation in the lower portion of the 2300-2310 MHz band. The Amateur Service could, over time, reconfigure its band plan to accommodate this migration, but what is indisputably required, now, is protection against disruption of amateur weak-signal, and other experimental operation (clustered around 2304 MHz) from other services. For this reason, and because the Amateur Service is, perhaps uniquely, capable of protection of NASA deep-space research at frequencies between 2290 and 2300 MHz, the Amateur Service allocation at 2300-2305 MHz should be upgraded to primary. Amateurs can also make extensive use of the remainder of the 2300-2305 MHz segment for point-to-point links, and FM operation, paired with frequencies in the 2390-2400 MHz band, thus optimizing efficiency in the use of that band. What amateurs cannot do easily, however, is conduct certain types of communications in the high-noise, high-duty-cycle environment at

2305-2310 MHz that will be created by the new WCS above 2305 MHz. Those displaced types of communications will require the interference protection and stability afforded by a primary allocation at 2300-2305 MHz.

8. It is not sufficient to continue the secondary amateur allocation at 2300-2305 MHz. The commercial operations incoming above 2305 MHz necessitate some stability in the long-term planning of the 2300-2305 MHz segment by amateurs to reaccommodate certain uses, and the necessary arrangements to provide absolute protection for Government Deep-Space Research operation at 2290-2300 MHz. Neither are the uses made by amateurs at 2300-2305 MHz, including Earth-moon-Earth operation, terrestrial weak-signal operation, and propagation beacon monitoring, accommodated without some protection of the sensitive receivers employed. The League would accept and accommodate footnotes imposing necessary interference protection constraints on amateur operation relative to the NASA Deep-space network and Planetary Radar operations at Goldstone, CA or elsewhere, but amateurs need and should be afforded protection from interference within the 2300-2305 MHz band. It is requested that the Commission not introduce any other use in the band, in view of the necessity to protect the extant and expanding amateur uses which involve sensitive receivers. It is also necessary to maintain flexibility in the amateur uses of the 2300-2305 MHz band, so that some paired, point-to-point operation can be conducted, together with frequencies in the 2390-2400 MHz band.

III. Conclusions

9. It is somewhat discouraging that the Congress, without any apparent thought for the partial displacement effect of the Amateur Service that would inevitably result, unilaterally ordered the reallocation of the 2305-2310 MHz segment of the 2300-2310 MHz band for commercial operation. Indeed, prior to the Congressional action, both NTIA and the Commission had made specific findings concerning the allocation status of the band. Those findings and conclusions were apparently disregarded in this legislation. The 2300-2310 MHz band is now occupied exclusively by radio amateurs following the reallocation in August of 1995. Congress' prevailing commitment under OBRA is to protect incumbent amateur uses in the bands reallocated pursuant thereto. The Commission has offered assurances that it would carefully evaluate the impact on radio amateurs from any allocation plan at 2300-2310 MHz. Now, those assurances of protection and careful consideration have, with respect to the upper half of that allocation, been largely preempted by Congress. Yet, there remains an opportunity to minimize the adverse effect of the reallocation on the Amateur Service, and to protect the most prevalent uses of the 2300-2310 MHz band, near 2304 MHz.

10. The Commission has little choice but to implement this allocation as it has proposed to do, in accordance with the Congressional directive by which it is bound. The Commission should not, however, lose sight of the fact that the amateur allocation at 2 GHz has been steadily, and largely arbitrarily, winnowed down

during the past ten years. It is time that the Commission took an affirmative step to protect what remains of the Amateur Service allocation, and the important and varied amateur uses at 2300-2310 MHz, especially those centered at and near 2304 MHz. The Commission must affirm in this proceeding that amateur operation, secondary to the WCS, may continue at 2305-2310 MHz; it must contemporaneously, in this proceeding or in Docket 94-32, elevate the amateur allocation at 2300-2305 MHz to primary status[9]; and it must affirm the long-term stability of that primary allocation at 2300-2305 MHz, so that amateurs may plan for, and make the necessary commitment to, the establishment of stations in that band over the long term.

Therefore, the foregoing considered, the American Radio Relay League, Incorporated urgently requests that the Commission, in any Report and Order in this proceeding, continue the Amateur secondary allocation at 2305-2310 MHz; amend the Table of Frequency Allocations, (47 C.F.R. §2.106), to elevate the Amateur Service allocation at 2300-2305 MHz band to primary domestically; and amend

[9] The League's petition, attached to these Comments, include a proposed Appendix that contains the requisite changes to the Table of Allocations (47 C.F.R. §2.106) and to the Part 97 Amateur Rules, to implement a primary allocation for the Amateur Service at 2300-2305 MHz.

accordingly the Amateur Service Rules (47 C.F.R. Part 97) to accommodate the revised domestic allocation table.

Respectfully submitted,

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December 4, 1996

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Allocation of Spectrum Below 5 GHz Transferred From Federal Government Use	)	ET Docket No. 94-32

To: The Commission

PETITION OF

THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED

FOR ISSUANCE OF FURTHER NOTICE OF PROPOSED RULE MAKING

The American Radio Relay
League, Incorporated
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November 19, 1996

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SUMMARY

The American Radio Relay League, Incorporated (the League), the national association of amateur radio operators in the United States, requests the issuance of a Third Notice of Proposed Rule Making in the captioned proceeding, looking toward the amendment of Section 2.106 of the Commission's rules with respect to the creation of a primary domestic allocation for the Amateur Radio Service in the 2300-2305 MHz band, and associated amendments to the Part 97 regulations governing the Amateur Service.

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Allocation of Spectrum Below 5 GHz Transferred From Federal Government Use	)	**ET Docket No. 94-32**
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To: The Commission

PETITION OF THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED FOR ISSUANCE OF FURTHER NOTICE OF PROPOSED RULE MAKING

The American Radio Relay League, Incorporated (the League), the national association of amateur radio operators in the United States, by counsel and pursuant to Section 1.401 of the Commission's Rules, hereby respectfully submits its request for issuance of a Third Notice of Proposed Rule Making[1] in the captioned proceeding, looking toward the amendment of Section 2.106 of the Commission's rules with respect to the creation of a primary domestic allocation for the Amateur Radio Service in the 2300-2305 MHz band, and associated amendments to the Part 97 regulations

[1] As will be seen herein, the League requests the issuance of a Third Notice of Proposed Rule Making in the captioned proceeding. The procedural means of achieving the relief requested was determined by the Commission's stated intent in the *Plan for Reallocated Spectrum* (FCC 96-125, *infra, at paragraph 65*), to consider "Group 2" frequency bands in further rulemaking, presumably in this proceeding. The "Group 2" bands include the 2300-2310 MHz band. However, a procedural alternative available to the Commission, which may be more expeditious, would be to consider this matter in any Report and Order issued in General Docket 96-228, which deals with the 2305-2320 MHz and 2345-2360 MHz bands. The League would accede to either procedural vehicle for affording the relief requested herein.

governing the Amateur Service. As good cause therefor, the League states as follows:

I. Background

1. The allocation history and current status of the 2300-2310 MHz band, and its availability and use by the Amateur Service, are reasonably well summarized in the Commission's *Plan for Reallocated Spectrum*, FCC 96-125, released March 22, 1996, at paragraphs 41-45. However, in evaluating the history of amateur allocations at 2 GHz, and the extent to which that allocation has been steadily eroded, it is necessary to view a larger segment of that spectrum, rather than examining only the 2300-2310 MHz band.

2. Until approximately ten years ago, the Amateur Service had secondary access domestically to the entire 2300-2450 MHz band. Indeed, this band is allocated on a worldwide basis to the Fixed services on a primary basis. In Regions 2 and 3, the co-primary allocations are for fixed, mobile and radiolocation. The Amateur Service is secondary in the entire 2300-2450 MHz band in all three regions, subject to certain footnotes to the Table of Allocations.[2] In the United States, the 2400-2483.5 MHz segment is available for Industrial, Scientific and Medical devices operating pursuant to

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[2] See footnotes 664, 750B, 751, 751B, and 752. These establish, among other things, that use of the 2310-2390 MHz band for aeronautical mobile telemetry has priority over other mobile uses; that 2310-2360 MHz is allocated for BSS (sound) and complimentary terrestrial broadcasting on a primary basis in the United States; and that international coordination of BSS (sound) and terrestrial broadcast use is required.

U.S. Footnote 253, however, states that "*In the band 2300-2310 MHz, the fixed and mobile services shall not cause harmful interference to the amateur service*".

Part 18 of the Commission's rules. The domestic allocation for amateurs at 2300-2450 MHz provided essentially unlimited use of the 2300-2400 MHz band, due to the relatively light use by Government Radiolocation, away from populated areas. Most amateur operation below 2400 MHz, however, has historically concentrated most densely around 2304 MHz. The portion of the band above 2400 MHz has been used for amateur television and satellite operation. A copy of the 1991 ARRL bandplan is attached hereto as Exhibit "A" for reference.

3. The Amateur Service was excluded from the 2310-2390 MHz band domestically in 1984, in order to accommodate aeronautical flight test telemetry in that band in certain areas.[3] Amateur use of the 2400-2450 MHz band has always been limited by Part 18 operation above 2400 MHz. An amateur primary allocation at 2390-2400 MHz was just created in this proceeding,[4] a segment in which data-PCS will also be able to operate. The most useful segment for amateur weak-signal communications and propagation research, including beacon operation, is 2300-2310 MHz, because of the low noise levels in that band. Just below that band, at 2290-2300 MHz, NASA operates the Government Deep Space Network receiver, which requires protection from interference. Amateur operation above 2300 MHz is entirely compatible with the avoidance of interference to

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[3] See the *Second Report and Order*, General Docket 80-739, FCC 83-511, released December 8, 1983; and the *Report and Order*, FCC 84-446, 56 RR 2d 1413 (1984) in Docket 84-186.

[4] See the *First Report and Order and Second Notice of Proposed Rule Making* in this proceeding, 10 FCC Rcd. 4769 (1995), which allocated the 2390-2400 MHz and 2402-2417 MHz bands on a primary basis to the Amateur Service.

the Deep Space Network and associated government operations below 2300 MHz. This is due not only to the fact that amateur activity at 2300-2310 MHz is currently centered at 2304 MHz, but also because of the traditionally cooperative relationship that exists between amateurs and the conductors of radioastronomy activities.

II. The Omnibus Budget Reconciliation Act

4. The Omnibus Budget Reconciliation Act of 1993, Pub. L. 103-66, 107 Stat. 312, enacted August 10, 1993, ("OBRA") ordered the NTIA[5] to identify at least 200 MHz of spectrum, which was then allocated for use by Federal Government Agencies below 5 GHz, that could be transferred to private sector use. At least 100 MHz of this spectrum had to be below 3 GHz. *See, 47 U.S.C. §923(e)(2)(A) and (B)*. In response to OBRA, NTIA in fact identified 235 MHz of spectrum to be reallocated, and among these was the 2300-2310 MHz band. OBRA instructed that, in identifying spectrum for transfer to non-Government use, the Secretary of Commerce must avoid "excessive disruption of existing use of Federal Government frequencies by amateur radio licensees". Furthermore, in identifying spectrum for reallocation and considering the possible non-Government uses of the bands identified, the Secretary of Commerce was to consider "the extent to which, in general, commercial users could share the frequency with amateur radio licensees."

[5] NTIA would act through the Secretary of Commerce.

5. Both NTIA, in its *Spectrum Reallocation Final Report*[6], which made available for private sector reallocation the 2300-2310 MHz band, and the Commission, in its *Plan for Reallocated Spectrum*, (*supra*), indicated significant doubt that commercial services could successfully share with amateurs at 2300-2310 MHz.[7] Nonetheless,

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[6] U.S. Department of Commerce, NTIA Special Publication 95-32, February, 1995 (referenced herein as the "Final Report"). Appendix B of that document is attached hereto as "Exhibit B" for reference.

[7] The Appendix B of the Final Report includes a basic analysis of amateur operation and the potential for non-government services to share with amateurs. The latter source, the FCC Reallocation Plan, bears extensive quotation:

> ******
>
> Potential uses of this band were discussed in our recent proceeding to allocate spectrum transferred from Federal Government use, ET Docket No. 94-32, although action regarding this band was deferred (citation omitted). Comments filed in that proceeding describe current amateur service use of 2300-2310 MHz. The American Radio Relay League, as well as other commenters, report that this band is used for weak signal operation centered on or near 2304.1 MHz. Weak signal operations require the use of highly sensitive receivers and high powered transmitters. A channelling plan submitted by the Southern California Repeater and Remote Base Association shows weak signal operations from 2303.75-2304.75, with the remainder of the 2300-2310 MHz band being paired with the 2390-2400 MHz band for fixed microwave operations. As discussed in the background section of this plan, the Commission, in Docket 94-32, made primary the allocation for the amateur service at 2390-2400 MHz.
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> Sharing between Federal Government users and the amateur service has been successful largely because Federal operations are generally located outside of highly populated areas. (citation omitted). It is very unlikely that the Amateur Service will enjoy an analogous situation with a commercial or other private sector service. If commercial services are to share with the weak signal operations located at 2303.75-2304.75 MHz, they must be able to withstand potential interference from the high-powered transmitters used for those